8. DoD, DOE, and U.S. Intelligence Programs for Countering Paramilitary and Terrorist NBC Threats

This section provides descriptions of the R&D and acquisition programs and related activities of DoD, DOE, and U.S. Intelligence to counter paramilitary and terrorist NBC threats, including new interagency initiatives to deal with these threats.

8.1 Introduction: Relevant ACEs and Policy Objectives

The activities and programs described in this section respond to the ACE priorities associated with supporting SOF activities and defending against paramilitary, covert delivery, and terrorist NBC threats (DoD/U.S. Intelligence ACE priority 5 and DOE ACE priority 2) and with providing consequence management for terrorist incidents involving NBC weapons effects and the release or dispersal of NBC agents (DoD/U.S. Intelligence ACE priority 6 and DOE ACE priority 4), including providing assistance and support to "First Responders". First Responders are those local, state, and federal authorities that have crisis and consequence management responsibilities in the event of an NBC terrorism incident and who are typically the first to arrive on the scene.

In January 1997, the Federal Emergency Management Agency (FEMA) and the FBI submitted their *Report to Congress on Response to Threats of Terrorist Use of Weapons of Mass Destruction*. The report, prepared at the direction of the President and Congress, assesses current federal crisis and consequence management capabilities, identifies shortfalls in these areas, and examines measures to remedy the shortfalls. It also describes the roles that various departments and agencies play in preventing, mitigating, and managing NBC-related terrorist incidents. Of particular interest to the CPRC are the roles of DoD, DOE, and U.S. Intelligence. DoD responsibilities include designating military personnel and equipment to perform emergency technical response missions, such as: NBC sample collection, analysis, and identification of on-site contaminants; decontamination; air monitoring; medical treatment; and securing, transporting, and disposing of NBC devices "when beyond the capability of an otherwise cognizant agency" (i.e., the FBI, Environmental Protection Agency (EPA) for CW/BW, or DOE or EPA for nuclear and radiological materials). DOE responsibilities include "analyzing threat messages … for technical content, nuclear design feasibility, and general credibility, and for providing such analyses to the FBI"; designating personnel and equipment to provide technical and scientific advice and recommendations, including risk/consequence assessments, to the on-scene commander; and designating Nuclear Emergency Search Team (NEST) units to assist in locating and identifying nuclear materials and assessing and disabling suspected nuclear devices. Both DoD and DOE counterterrorism responsibilities directly assist the FBI in its role as on-scene commander for NBC terrorist incidents in the U.S. U.S. Intelligence supports the federal counterterrorism effort in several ways, including participating in interagency working groups such as the Interagency Intelligence Committee on Terrorism and the Chemical/Biological/Radiological Subcommittee. These working groups provide opportunities for federal agencies responsible for responding to NBC terrorist incidents to develop closer working relationships.

8.2 New Interagency Initiatives to Counter Paramilitary and Terrorist NBC Threats

8.2.1 Interagency Domestic Preparedness Initiatives. Subtitle A, "Domestic Preparedness," of the Defense Against Weapons of Mass Destruction Act of 1996 (Public Law No. 104-201, Secs. 1411-1417, 110 Stat. 2717-2725, 1996) directs the President to: i) enhance the capability of the Federal Government to prevent and respond to terrorist incidents involving NBC weapons, and ii) provide enhanced support to improve the capabilities of state and local emergency response agencies to respond to such incidents. FEMA chairs the Senior Interagency Coordination Group which facilitates interagency coordination of policy issues and program activities for consequence management initiatives. This group also includes representatives from the Departments of Defense, Energy, Justice, Health and Human Services, Transportation, and Agriculture, the EPA, and General Services Administration. DoD has allocated $46 million in FY 1997 to enhance emergency domestic preparedness and response to terrorist NBC attacks. Under the leadership of ASD(SO/LIC), DoD is implementing the following activities:

- *Domestic Emergency Response Preparedness.* Initiatives include: developing First Responder training programs for local authorities in 26 metropolitan areas; implementing an NBC release hot line; improving DoD's chemical/biological rapid response by establishing the Chemical Biological Quick Reaction Force (CBQRF) subordinate to the DoD Response Task Force Headquarters; conducting exercises to evaluate and improve current DoD coordination capabilities for incidents involving NBC agent releases; and developing and conducting exercises and preparedness tests in coordination with federal, state, and local agencies to improve the interagency response.
- *The Chemical/Biological Incident Response Force (CBIRF).* The CBIRF, established by the Marine Corps to deal with the consequences of incidents involving the release of CW/BW agents, is receiving additional funding under this initiative to expedite fielding of improved CW/BW protection and detection equipment for consequence management. The CBIRF is an element of the CBQRF.
- *The Consequence Management 911-BIO ACTD and Other R&D Activities.* The proposed 911-BIO ACTD will evaluate and accelerate the fielding of new technologies for use by the Army's Technical Escort Unit and the CBIRF to respond quickly and effectively to terrorist use of BW. Other related R&D activities are also being sponsored.
- *Metropolitan Medical Strike Teams.* DoD is assisting the Secretary of Health and Human Services in establishing Metropolitan Medical Strike Teams to provide prompt medical services to victims exposed to NBC weapons effects.
- *U.S. Customs Service Support.* DoD is assisting the U.S. Customs Service in the acquisition of equipment to detect and interdict the movement of NBC weapons and related materials across U.S. borders.

In FY 1998, DoD plans to continue these domestic preparedness and response initiatives focusing on: i) providing emergency response preparedness through First Responder training and assistance to metropolitan area authorities; ii) improving DoD's rapid chemical and biological response capabilities; and iii) conducting preparedness exercises in coordination with federal, state, and local agencies.

8.2.2 Other Interagency Initiatives to Counter Paramilitary and Terrorist NBC Threats. The following interagency activities are important in addressing the global threat of NBC terrorism.

The CPRC's Role in Countering Paramilitary and Terrorist NBC Threats. The CPRC is coordinating DoD, DOE, and U.S. Intelligence activities and programs developing technologies and systems that can be used by federal, state, and local emergency response teams to counter terrorist activities involving NBC weapons. It also coordinates these activities with other interagency organizations, including the TSWG. The CPRC brings senior level attention to the activities and programs of DoD, DOE, and U.S. Intelligence to help ensure the effective application of resources and expertise in countering these threats. In recognition of the CPRC's responsibilities for countering NBC paramilitary and terrorist threats, ASD(SO/LIC) has been included as a charter member of the CPRC Standing Committee established in 1996.

The Technical Support Working Group. The TSWG was established as a working group of the NSC's Interagency Working Group on Counterterrorism and acts as its technology development component. It is primarily concerned with rapid prototype development of equipment to address critical multi-agency and future threat counter- and anti-terrorism requirements. While its funds are derived principally from DoD, the Departments of Energy and State and the FBI also contribute directly to project activities. The TSWG develops technologies for a variety of users including DoD, DOE, U.S. Intelligence, Secret Service, U.S. Marshals Service, Federal Aviation Administration, U.S. Customs Service, and the Center for Disease Control and Prevention. DoD, under the direction of ASD(SO/LIC), develops technology to meet these interagency requirements through the CTTS program. A significant portion of the TSWG's technology development efforts are directly related to countering NBC weapons.

8.3 DoD Activities and Programs to Counter Paramilitary and Terrorist NBC Threats

In coordination with the FBI and other U.S. Government counterterrorism components, DoD is continuing to pursue several activities to counter paramilitary and terrorist NBC threats. These efforts include supporting, training, and equipping DoD teams to detect, neutralize, and render safe NBC weapons and devices in permissive and nonpermissive environments both in the U.S. and overseas. These DoD teams include the Army's Technical Escort Units (TEU) and the 52nd Ordnance Group, the Navy's Defense Technical Response Group (DTRG), Navy Explosive Ordnance Disposal (EOD) units, and SOF units. DoD is also actively supporting the development of robust consequence management capabilities, like those embodied in the Marines' CBIRF, to respond to incidents involving NBC weapons, including the release of NBC agents. These activities and programs are discussed in the remainder of this section.

The Defense Against Weapons of Mass Destruction Act of 1996 (Sec. 1414 of the FY 1997 NDAA) also directed the Secretary of Defense to "develop and maintain at least one domestic terrorism rapid response team composed of members of the Armed Forces and employees of the Department of Defense who are capable of aiding Federal, State, and local officials in the detection, neutralization, containment, dismantlement, and disposal of weapons of mass destruction containing

chemical, biological, or related materials." In addition, Presidential Decision Directive-39, dated June 1995, is the principal interagency guidance for counterterrorism activities. The two DoD mission documents continuing to guide the Department's counterterrorism response efforts are the CJCS's *Counterproliferation 0400 CONPLAN* and the *Counterterrorism 0300 CONPLAN*. These documents, developed by each CINC for their Area of Responsibility, delineate user requirements and ensure "requirements/demand pull" of technology development activities. The CINCs are developing, in the current fiscal year, individual consequence management plans as part their area-specific concept plans as required by the *Counterproliferation 0400 CONPLAN*.

DoD is budgeting a total of $172.6 million for FY 1998 in technology R&D and acquisition activities in response to ACE priorities directly involving countering NBC paramilitary and terrorist threats (i.e., DoD ACE priorities 5 and 6).

8.3.1 New DoD Initiatives. Four new DoD initiatives, in addition to the interagency domestic preparedness initiatives described above, are described below. Additional details are provided in Table 8.1 and in Appendix C.

DoD's Force Protection Initiative. The Secretary of Defense has tasked the CJCS to review the force protection capabilities of U.S. forces worldwide. Several DoD Agencies and OSD organizations are actively involved in this initiative. Currently, each Service is responsible for protecting its own personnel and facilities. Near-term force protection enhancements are being fielded through the Physical Security Equipment Action Group under the guidance of the Physical Security Equipment Steering Group (chaired by the Director of Strategic and Tactical Systems, PDUSD(A&T)(S&TS)) and funded under the OSD Physical Security Equipment Program (see below). These efforts are being coordinated with the technology development activities of the TSWG/CTTS. DSWA is supporting the initiative by conducting force protection assessments of facilities worldwide, fielding assessment teams to identify and evaluate force protection shortfalls, and assisting commanders in rectifying the identified shortfalls. The CBD Program is also assisting in this effort. The CJCS has approved DSWA's proposed methodology and concept of operations for conducting the assessments. Using existing contractor resources, DSWA has conducted three assessments to date. DSWA has also organized and conducted a symposium with industry to publicize and seek ideas and inputs to fulfill CINC and Service requirements to address force protection shortfalls. Key milestones are to: i) complete 50 assessments by the end of calendar year 1997 and complete 100 assessments by the end of 1998; ii) continue to apply the latest technology to achieve enhanced force protection; and iii) define a prioritized technology R&D plan to address key force protection shortfalls.

The Chemical/Biological Incident Response Force. In April 1996, at Camp Lejeune, North Carolina, Marine Forces Atlantic activated a dedicated unit to respond to the consequences of incidents involving the release of CW/BW agents. This self-contained, self-sufficient response unit is integrated into the consequence management plans of the CINC U.S. Atlantic Command and is trained to deploy domestically or overseas in support of the CINCs or the Department of State. The CBIRF includes approximately 350 Marines and Sailors organized into six elements: a command element, a chemical/biological reconnaissance element, a chemical/biological decontamination element, a medical element, a security element, and a service support element. The CBIRF will have enhanced capabilities for detecting and identifying specific CW/BW agents,

assessing downwind hazards, conducting advanced lifesaving support, and decontaminating patients to facilitate medical treatment. It will employ state-of-the-art equipment to treat casualties via a "reachback" link to civilian scientific and medical experts, conduct advanced lifesaving support, and provide communications and an enhanced transportation capability. The CBIRF is a key player in the 911-BIO ACTD currently under development. As a result of congressional plus-up funding increases, the Marine Corps has been able to rapidly equip CBIRF with improved protection and BW detection equipment.

The Consequence Management "911-BIO" ACTD. ATSD(NCB)'s Deputy for Counterproliferation has begun executing a "fast-track" consequence management ACTD involving the CBIRF and the Army's TEU. ACTD demonstrations will take place in June and December 1997 to demonstrate the applicability of key BW detection, modeling and simulation, individual protection, and decontamination technologies in a consequence management setting. The objective of the 911-BIO ACTD is to enhance military capabilities to respond effectively to the terrorist/paramilitary use of BW by demonstrating: i) key BW consequence management technologies in a field environment, in part to validate R&D and acquisition priorities; ii) integrated operational concepts of CBIRF and TEU; and iii) the ability of both DoD units to integrate their operations with other federal, state, and local agencies. The TEU and CBIRF will use existing BW agent detection and decontamination technologies and exercise emerging telemedicine and "reachback" communications technologies. Modeling techniques for agent dispersion inside buildings will also be evaluated. The concepts and technologies demonstrated during the ACTD will be made available to the users as operational prototype systems. Provided funds are available in FY 1998, the Counterproliferation Support Program will work with the Army's Chemical and Biological Defense Command's (CBDCOM) Domestic Preparedness Office and the CBIRF to ensure procurement and implementation support for equipment and capability "leave behinds" for the user community.

Chemical and Biological Defense Program Anti-Terrorism Support. The CBD Program is supporting anti-terrorism activities by conducting vulnerability assessments of DoD installations to CW/BW terrorism threats. The knowledge gained from these assessments is used in training U.S. forces to respond to CW/BW threats. In addition to developing training programs, efforts are focusing on developing a suitable process and establishing an assessment team to conduct the vulnerability assessments.

8.3.2 Counterproliferation Support Program Projects to Counter Paramilitary and Terrorist NBC Threats. The Counterproliferation Support Program is coordinating its technology prototype development activities in this functional area with the TSWG, through ASD(SO/LIC) and its CTTS program, the U.S. Special Operations Command (USSOCOM), and Joint Service EOD units to ensure relevance and responsiveness in meeting user needs. The DOE National Laboratories are also contributing to these projects. Project details are discussed below, in Table 8.1, and in Appendix C (Table C.1).

In support of the *Counterterrorism 0300 CONPLAN* and the *Counterproliferation 0400 CONPLAN*, ATSD(NCB) on behalf of the Counterproliferation Support Program, operates under a Memorandum of Agreement with USSOCOM and is finalizing a Terms of Reference with ASD(SO/LIC). These agreements are facilitating closer cooperation among the organizations and

streamlining the process of responding to the requirements of CINC SOCOM, DoD, and interagency organizations for countering NBC paramilitary and terrorist threats. These agreements focus on leveraging CW/BW defense technologies to accelerate their fielding and adapt them to the special operations environment. Accelerating technology development helps address the critical technology shortfalls of Service and SOF units tasked with NBC-related missions. This initiative will also facilitate the transfer of DoD-developed technologies to other interagency response groups within DOE, U.S. Intelligence, the FBI, Secret Service, U.S. Customs Service, and the Department of State.

The Counterproliferation Support Program is working closely with the TSWG and the CTTS program to improve capabilities unique to the interagency emergency response needs of First Responders. Projects planned for FY 1998 include development of: i) a deployable Chemical/Biological Sentry System (CBSS) for detection and warning of CW/BW agents; ii) a Biological Detection Kit for rapid field screening and generic detection of BW agents; iii) a compact, long shelf-life "Escape Hood" (formerly “Quick Mask™”) for short-duration protection against CW/BW agents. Key accomplishments for the First Responder projects since last year’s report include: i) integration of CW/BW sensors and development of interface and display software for the CBSS; ii) component testing of the prototype Biological Detection Kit; iii) completion of a market survey and assessment of current-off-the-shelf protective masks for potential application as the Escape Hood; and iv) user implementation of a prototype chemical/biological EOD suit and a modified EOD helmet used by the TEU during the 1996 Olympic Games.

The Counterproliferation Support Program is funding a wide range of specialized SOF technologies adapted to the special operations environment to detect, disable, render safe, and, if necessary, recover critical components from NBC devices in a nonpermissive and time sensitive environment. Technology prototypes under development include: i) a nonintrusive CW agent detection system using swept frequency acoustic interferometry (SFAI) for identifying CW agents in situ without requiring direct sampling of the agent; ii) a drill extractor that enables rapid sampling of suspected CW or BW containers without releasing the contents; iii) a SOF-specialized version of the FOWG BW detector for rapid identification of sampled BW agents; iv) a SOF adapted version of the ICAM/ACADA CW detectors; v) a rapid transport container for recovered NBC weapons and materials; vi) equipment to enhance capabilities to gain access to suspected NBC weapon facilities; and vii) specialized devices for NBC target structural and functional defeat. Key accomplishments of the SOF-specialized technology projects include: i) testing and evaluation of a fielded SFAI prototype; ii) completion of a SOF FOWG BW detector prototype and delivery of prototype devices to the CBIRF; and iii) completion of a drill extractor fieldable prototype for CW/BW sample retrieval and procurement of additional prototypes for training units.

The Counterproliferation Support Program is also funding, in cooperation with the Navy EOD Technology Office, efforts to acquire and train EOD response teams to access and use specialized equipment stored in the U.S. and prepositioned abroad (and assigned to the geographic CINCs). EOD teams based in the U.S. have long standing relationships with state and local law enforcement agencies and are likely to be the first on the scene in an incident involving an NBC device. They conduct the “access phase”, i.e., physically gaining access to the weapon or device, before specialized mission units (e.g., TEU or NEST) arrive to begin disabling the device. Availability of forward deployed equipment enhances training, operational readiness, and technical

response capabilities necessary to counter the full spectrum of NBC threats. Accomplishments include the continuing acquisition and forward deployment of specialized EOD equipment to support training and readiness sustainment. To date, this program has trained and equipped over 150 EOD specialists and 30 officers in advanced access and disablement procedures for countering improvised NBC devices – a capability that did not exist two years ago. In FY 1998, efforts will concentrate on instituting closer collaboration with the Explosive Ordnance Disposal/Low-Intensity Conflict (EOD/LIC) program (see subsection 8.3.3 below) to expedite the introduction of advanced access and disablement prototype equipment into the user's training element.

8.3.3 Other DoD Programs to Counter Paramilitary and Terrorist NBC Threats. DoD Agency and Joint Service programs are also addressing counterproliferation ACEs in countering paramilitary, covert delivery, and terrorist NBC threats. These are described below.

OSD Counterterror Technical Support Program. The CTTS Program is managed by ASD(SO/LIC) and addresses the joint interagency requirements developed by the TSWG. The CTTS program develops technology and prototype equipment with direct operational application to the national counterterrorism effort. Projects include technology development to support operations involving: hostage rescue; personnel protection; unconventional and NBC weapons and devices; attacks on installations, infrastructure, and the general populace; and explosives detection and disposal. The CTTS program responds to multi-agency requirements and priorities, and many of its constituent projects are co-funded in cooperation with non-DoD emergency response organizations. Current priorities are the detection and neutralization of terrorist-built explosive devices and countermeasures against CW/BW terrorism. Development of diverse products is continuing under the Explosives Detection and Disposal and Weapons of Mass Destruction Countermeasures segments of the CTTS program, including: i) detectors employing advanced technology Raman light spectroscopy to detect, characterize, and identify residues of improvised explosive devices; ii) blast suppression and CW/BW dispersal mitigation technologies and techniques; and iii) a container inspection system designed to non-intrusively determine materials present in large shipping containers. Key accomplishments since last year's report include: i) continued development of specialized access tools; ii) completion of technology development to detect improvised explosive devices utilizing chemiluminescence and three-dimensional x-ray technology; iii) test and evaluation of advanced mitigation techniques and systems for suppression of explosively dispersed CW/BW agents; iv) completion of a prototype enzyme decontamination mixture for destruction of G-type nerve agents, such as sarin; v) initial development of an improved blast protective suit with combined CW/BW protection; and vi) development of an improved in-field capability to detect nuclear materials. Additional project details are provided in Table 8.1 and in Appendix C (Table C.9).

OSD Joint Physical Security Equipment Program. This program consolidates related DoD Joint Service and Agency RDT&E programs developing advanced technologies for protecting critical, high value military assets from paramilitary, terrorist, intelligence, and other hostile threats. Efforts focus on protecting personnel, facilities, and high value weapons systems, including nuclear and chemical weapons systems and storage facilities. This program is serving as the focal point for near term upgrades to U.S. facilities under the Force Protection Initiative discussed above. Key accomplishments since last year's report include: i) completion of numerous qualification tests and evaluations of integrating video motion detection capabilities into the Tactical Automated Security

System; ii) installation of an interior Mobile Detection Assessment Response System in a Naval facility for operational evaluation; iii) installation of a Waterside Security System at Submarine Base Kings Bay, Georgia; iv) testing of promising commercial-off-the-shelf technologies for the Portable Explosive Detection project; and v) demonstration of prototype sensor hardware for various detection systems. Additional project details are provided in Table 8.1 and in Appendix C (Table C.9).

SO/LIC Analytical Support. This project provides specialized research and analytical support for ASD(SO/LIC). Projects address a broad spectrum of technical, acquisition, and policy issues relating to special operations, counter- and anti-terrorism, peacekeeping, psychological operations, counterinsurgency, unconventional warfare, and contingency operations. Additional project details are provided in Table 8.1 and in Appendix C (Table C.9).

OSD Explosive Ordnance Disposal/Low-Intensity Conflict Project. This project is a rapid prototyping effort to provide technology and equipment to military operators who are confronted with explosive threats. Tasks focus on detection, countermeasures, and neutralization of explosive devices of all sorts. Requirements submitted by the Joint Service EOD community and other LIC-oriented military users are prioritized by the OSD EOD/LIC Coordination Group. Additional project details are provided in Table 8.1 and in Appendix C (Table C.9).

Navy Joint Service EOD Systems and Procedures Programs. The Joint Service EOD Systems Program develops operational prototype EOD systems to detect, locate, identify, render safe, and dispose of unexploded ordnance of all types, including NBC munitions. Key accomplishments include: i) initial development of a "main charge disrupter" and approval to initiate development of a lightweight disrupter to aid in neutralizing explosive devices; and ii) continued development of an improved ordnance locator system. The Joint Service EOD Procedures Program complements the Joint Service EOD Systems Program by funding the Navy's DTRG, a contingency unit that mobilizes during incidents involving NBC weapons, and by supporting the testing and validation of EOD prototype systems. This program also develops specialized procedures, including procedures for handling nuclear munitions, required for detecting, localizing, and rendering safe unexploded ordnance. The in-service library of EOD field procedures developed under this program consists of over 2,800 EOD bulletins, approximately 100 of which address nuclear munitions. Key accomplishments since last year's report include: i) maintaining DTRG readiness; ii) continued development of EOD render safe procedures for foreign and U.S. ordnance; and iii) development of improved countermeasure procedures for improvised nuclear devices. Additional project details are provided in Table 8.1 and in Appendix C (Table C.4).

OSD Joint Robotics Program. This program was established in response to congressional guidance to consolidate Service and DoD Agency robotics programs on unmanned ground vehicle (UGV) systems and is executed under the oversight of the Director for Strategic and Tactical

Table 8.1: Key DoD Programs to Counter Paramilitary and Terrorist NBC Threats

Program/Project Title	Project Description	DoD ACE	Agency	FY 98 Budget [$M]	PE No.

New Initiatives					
• Domestic Preparedness Initiative	• Improve NBC emergency response preparedness and coordination with state and local agencies through First Responder training, interagency exercises, and technical assistance	5, 6	ASD (SO/LIC)	49.500	O&M
• DoD's Force Protection Initiative	• Conduct force protection assessments, field assessment teams to identify and evaluate shortfalls, and develop an R&D support plan	5	DSWA	4.500	pending
• Marine Corps CBIRF	• Unit dedicated to managing the consequences of incidents involving CW/BW release	6	USMC	20.200	O&M
• Consequence Management 911-BIO ACTD	• ACTD to enhance and integrate military capabilities to respond to terrorist/paramilitary use of BW	6, 5	ATSD (NCB)	-*	
• CBD Program Anti-Terrorism Support	• Vulnerability assessments of DoD installations to CW/BW threats and training for threat response	5	Joint Service	3.688	605384BP
CP Support Program					
• First Responder Support	• Development of capabilities and technologies to enhance interagency response to CW/BW threats	6, 5	SOCOM	1.200	603160D
• Specialized SOF Technologies and Prototype Devices	• Develop technologies adapted for SOF use that enhance capabilities to detect, access, disable, render safe, and recover NBC devices and improve NBC target defeat, mobility, and access capabilities	5	SOCOM	10.029	603160D
• Joint EOD Readiness Sustainment	• Operational plans and exercises and readiness sustainment training against NBC devices	5	SOCOM Navy	0.656	603160D
Strongly Related CP Programs					
• Counterterror Technical Support Program	• Develop technical capabilities and prototype systems to detect, render safe, and defend against paramilitary and terrorist NBC threats	5, 6	ASD (SO/LIC)	29.087	603122D
• Joint Physical Security Equipment	• Consolidates DoD activities for facility and nuclear and other high value weapons protection equipment	5	PDUSD (S&TS)	17.789	603228D
• SO/LIC Analytical Support	• Research/analysis of technical, acquisition, and policy issues relating to special operations, counterterrorism, and unconventional warfare	5, 6	ASD (SO/LIC)	1.611	603122D
• Explosive Ordnance Disposal/ Low Intensity Conflict Program	• Rapid prototyping effort to provide technology and equipment for the detection and neutralization of explosive devices	5	ASD (SO/LIC)	4.165	603122D
• Navy Joint Service EOD Systems Program	• Specialized EOD equipment to locate, access, and render safe explosive devices, including NBC devices, for all Services	5	Navy ASD (SO/LIC)	4.720	603654N
• Navy Joint Service EOD Procedures Program	• Tests and validates prototype EOD systems and develops specialized procedures for EOD units • Funds DTRG technical support unit	5, 6	Navy ASD (SO/LIC)	6.613	604654N
• Joint Robotics Program	• Consolidates Service/DoD efforts to demonstrate mature robotics technologies for EOD and other applications	5	PDUSD (S&TS)	16.399	603709D

* ACTD demonstrations will be completed in the first quarter of FY 1998 using FY 1997 dollars. FY 1998 funding, including funding for technology leave-behinds, has not been determined.

Systems (under the PDUSD(A&T)(S&TS)). The objective of the program is to demonstrate and validate mature robotics technologies that are adaptable to multi-Service applications, provide an unmanned operational capability in hazardous and contaminated environments, provide improved battlefield efficiency by permitting supervised autonomous operations, and serve to reduce force

manpower and support requirements. Telerobotic technologies are under development that enable the performance of missions in hazardous chemical and radiation environments and in situations where there is an explosive hazard or when NBC weapons might be present. Those projects having direct application to countering NBC paramilitary and terrorist threats include: i) the Remote Ordnance Neutralization System (RONS), designed to complement or augment EOD operations; ii) the Tactical Unmanned Vehicle (TUV), an organic, unmanned vehicle designed to provide U.S. forces with general reconnaissance, surveillance, and target acquisition support, including chemical vapor and other hazards detection; and iii) the Robotic Excavation Vehicle System (REVS) and the Basic Unexploded Ordnance Gathering System to detect, recover, and dispose of unexploded ordnance. Key accomplishments in these areas include: i) began EMD of RONS (RONS transfers to the Joint Service EOD program in FY 1998.); ii) completed an MoU with an operational EOD unit to improve the developer - user interface as part of the REVS project; and iii) completed a major UGV technology demonstration during which three vehicles operating cooperatively successfully conducted reconnaissance, surveillance, and target acquisition activities. Additional project details are provided in Table 8.1 and in Appendix C (Table C.9).

8.4 DOE Activities and Programs for Nuclear Emergency and Terrorism Response

DOE maintains several emergency response assets postured to respond to terrorist or other incidents involving nuclear weapons or devices. DOE conducts analyses and provides operational and technical support in response to nuclear emergency and terrorism events worldwide. DOE's threat assessment process consists of an evaluation of nuclear threats from technical, operational, and behavioral standpoints. The assessment is integrated into the decision process for deployment of operational assets. The emergency response asset with primary responsibility for responding to acts of nuclear terrorism is the NEST. NEST provides operational and technical support for resolution of incidents or accidents involving nuclear materials and can be deployed anywhere in the world under the authority of the lead federal agency (i.e., the FBI for operations within the U.S. and the Department of State for overseas operations). This national resource of skilled personnel and specialized equipment, which can be called upon as needed, is built on DOE's nuclear weapons design and production expertise. These resources are the most effective national assets to locate, identify, assess, and disable nuclear weapons and devices. Such devices include, for example, improvised nuclear devices with the potential to produce a nuclear yield as well as radiological dispersal devices which could be used to spread radioactive contamination.

DOE's recently initiated CBNP technology development program (described in Section 6.2) will provide direct support to future capabilities for countering and responding to CW/BW terrorist threats. The four thrust areas of fundamental biology, prediction**,** detection, and mitigation are focused on improving capabilities to detect and identify CW/BW agents; understanding and predicting the flow and concentration of CW/BW agents; and providing cost-effective, environmentally benign decontamination technologies (e.g., suitable for use in urban environments). DOE's integrated program to prevent or detect nuclear smuggling also plays a significant role in countering possible terrorist activities involving nuclear weapons or devices. DOE works closely with others in the interagency community, providing technology support for the detection and interdiction of illicit nuclear material. Efforts to secure nuclear material at its source and detect illicit nuclear material in transit will help to reduce the number of potential terrorist incidents.

8.5 U.S. Intelligence Activities and Programs Related to Countering NBC Terrorism

The reader is referred to the Intelligence Annex for information on these activities and programs.

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